

## PATENT ABSTRACTS OF JAPAN

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## (54) PRODUCTION OF PILE FABRIC HAVING EXCELLENT HEAT-INSULATION

## (57)Abstract:

PURPOSE: To obtain the subject knit or woven fabric having excellent heat- insulation and comfortableness by sufficiently opening the fiber tip parts of a pile fabric and uniformly and firmly attaching a binder containing far infrared radiation inorganic particles.

CONSTITUTION: The fiber tip parts of a pile fabric composed of preferably a hygroscopic fiber such as cotton or wool are sufficiently split and opened. The split tip parts are sprayed with a binder such as polyurethane resin, acrylic resin, etc., containing far infrared radiation inorganic particles such as cobalt oxide, iron oxide, zirconium oxide or manganese oxide. The far infrared radiation particles are uniformly and firmly bonded to the fiber to afford a pile fabric having excellent heatinsulation. The fabric is suitable for vest, insole, carpet cover cloth, etc.

## LEGAL STATUS

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TITLE: Mfg. pile knitted or woven fabric with good thermal insulation - by spraying pile tip with binder contg. far IR-radiating inorganic particles

PRIORITY-DATA: 1988JP-0335104 (December 30, 1988)

PATENT-FAMILY:

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ABSTRACTED-PUB-NO: JP 02182968A

BASIC-ABSTRACT:

Prepn. comprises imparting a binder contg. far infrared radiating inorganic particles by spraying on the tip part of piles of the fabric. The tip part has hair cracks.

The raw material is natural fibre such as cotton, wool etc., and synthetic fibre such as acryl, polyester etc., and a blend or mixt. of them. The binder is e.g., a urethane type elastomer resin and acrylic ester type resin. The far infrared radiating inorganic particle is an oxide of zirconium, cobalt, iron, manganese, copper, titanium and chromium, silica, silicon carbide, alumina, and their mixt.

USE/ADVANTAGE - Useful for a liner of a vest or coat, a shoe insole, a cover for a hot carpet etc. The fabric is very comfortable.

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Basic Abstract Text - ABTX (1):

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Basic Abstract Text - ABTX (2):

The raw material is natural fibre such as cotton, wool etc., and synthetic fibre such as acryl, polyester etc., and a blend or mixt. of them. The binder is e.g., a urethane type elastomer resin and acrylic ester type resin. The far infrared radiating inorganic particle is an oxide of zirconium, cobalt, iron, manganese, copper, titanium and chromium, silica, silicon carbide, alumina, and their mixt.

Basic Abstract Text - ABTX (3):

USE/ADVANTAGE - Useful for a liner of a vest or coat, a shoe insole, a cover for a hot carpet etc. The fabric is very comfortable.

Title - TIX (1):

Mfg. pile knitted or woven fabric with good thermal insulation - by spraying pile tip with binder contg. far IR-radiating inorganic particles

Standard Title Terms - TTX (1):

MANUFACTURE PILE KNIT WOVEN FABRIC THERMAL INSULATE SPRAY  
PILE TIP BIND  
CONTAIN INFRARED RADIATE INORGANIC PARTICLE